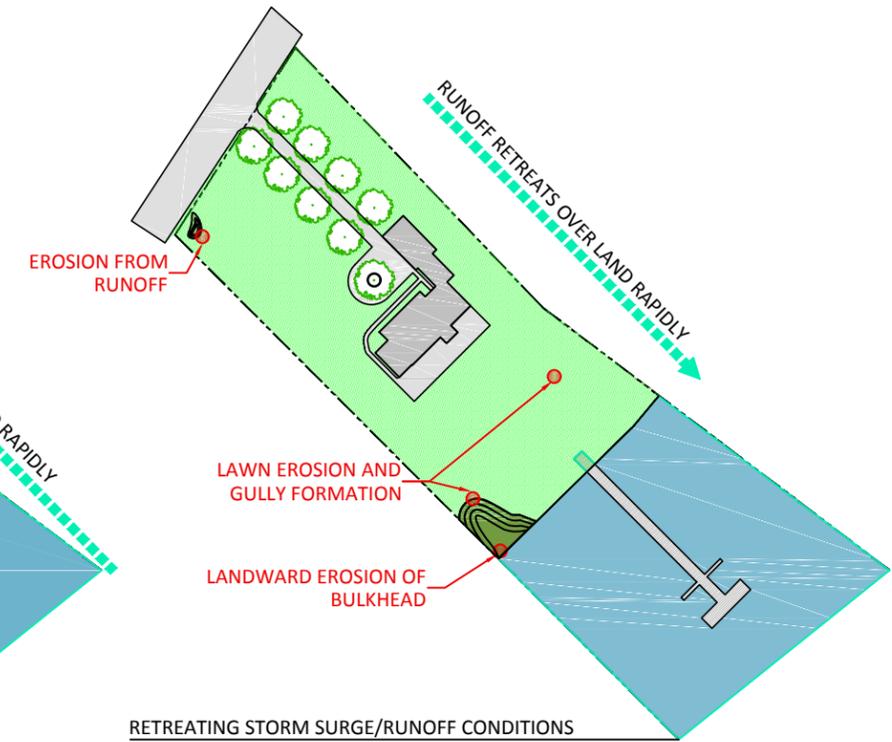
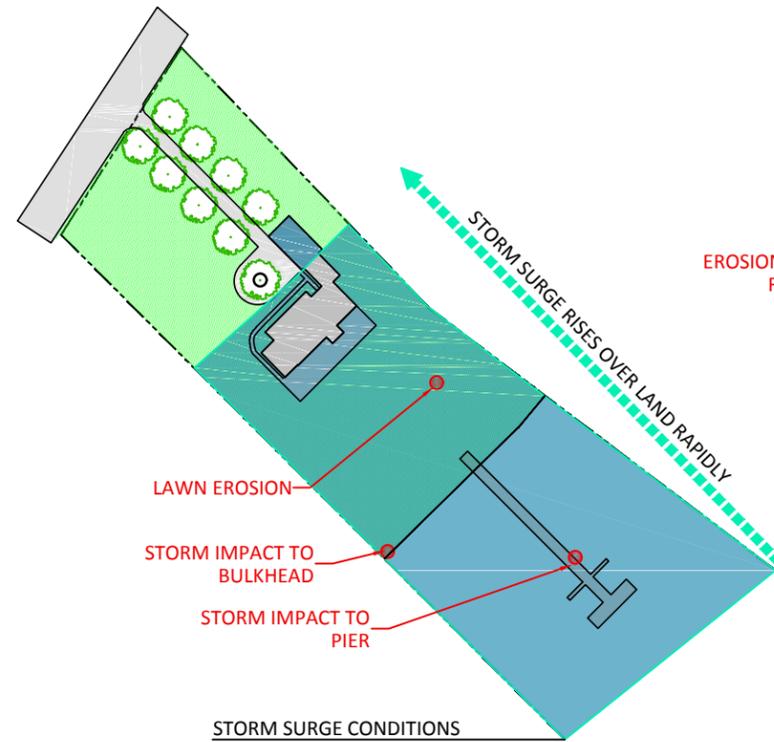
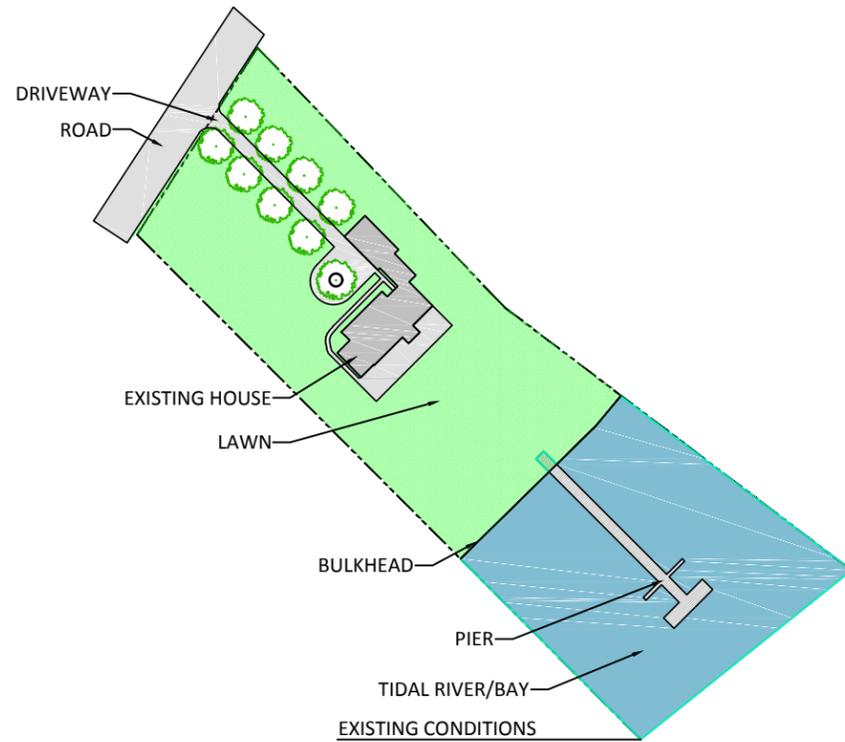


## EXISTING CONDITIONS

### SHORELINE WITHOUT BUFFER PLANTING

A WATERFRONT PROPERTY THAT IS COMPOSED OF MOSTLY TURF, OR MOWED LAWN TO THE LAND-WATER INTERFACE, IS AT HIGH RISK OF STORM IMPACTS. THE IMPACTS COME FROM BOTH THE TIDAL SURGES AND UPLAND RUNOFF, WHICH IS DUE TO RAIN AND RETREATING STORM SURGES. THE TURF ESSENTIALLY ALLOWS WATER TO MOVE WITH GREAT VELOCITY OVER ITS SURFACE, WHICH UPLIFTS TOPSOIL AND TRANSPORTS IT OUT INTO THE TIDAL RIVER OR BAY. AS BOTH TIDAL SURGES AND UPLAND RUNOFF WORK AGAINST THE LAND, IN THIS SCENARIO, THERE IS VERY LITTLE GROUND COVER OR ROOT STRUCTURE PRESENT TO ABSORB IMPACTS CAUSED BY MOVING WATER. FAST MOVING WATER CAUSES EROSION IN LAWN LANDWARD OF THE BULKHEAD AND A GULLY TO FORM. IT DAMAGES THE BULKHEAD ALLOWING HIGH TIDES TO FLOOD BEHIND THE BULKHEAD AND CAUSES ADDITIONAL EROSION THAT TURF GRASS CANNOT CONSTRAIN.



## PROPOSED CONDITIONS

### STORM RESILIENT BUFFER

BY INTRODUCING A BUFFER MADE OF SHORELINE GRASSES, SHRUBS, AND TREES AT THE WATER'S EDGE, THE LANDSCAPE BECOMES MORE RESILIENT AGAINST STORM IMPACTS. SHORELINE GRASSES, SHRUBS, AND TREES PROVIDE A DIVERSE VERTICAL BUFFER TO HELP DISSIPATE UPLAND WAVE ENERGY CAUSED BY WIND AND STORM SURGES; AN EXTENSIVE GROUND COVER TO SLOW TIDAL WATERS AND UPLAND RUNOFF; AND A DENSE AND DEEP ROOT SYSTEM THAT BINDS SOIL. FURTHERMORE, IN THIS SCENARIO, A RAIN GARDEN IS REPRESENTED, WHICH CAPTURES FLOODING WATERS AND DETAINS IT TO REDUCE THE AMOUNT OF WATER RUNNING OFF THE LANDSCAPE AT ONCE.

